

REMARKS

Reconsideration of the application in light of the amendments and the following remarks is respectfully requested.

Status of the Claims

Claim 2, 10-14, 18-20 and 28 were previously canceled. Claims 1, 3-9 and 15-17 are currently being canceled without prejudice or disclaimer. Claims 21, 22 and 25-27 have been amended and claims 29-34 have been newly added. Claims 21-27 and 29-34 are pending after entry of this Amendment. No new matter has been added.

Rejections Under 35 U.S.C. § 103

Claims 1, 3, 6, 7, 15, 21, 22, 26 and 27 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,514,251 to Ni et al. (hereinafter “Ni”) in view of U.S. Patent No. 6,969,373 to Schwartz et al. (hereinafter “Schwartz”). Applicant respectfully traverses the rejection.

Applicant has canceled claims 1, 3, 6, 7 and 15 without prejudice or disclaimer of the subject matter contained therein, rendering the rejection moot.

Regarding claims 21 and 22, the Examiner contends that Ni discloses all of the elements of claim 1 except for a flow control mechanism formed on the outside surface of the first non-insulation area. The Examiner contends that Schwartz discloses a flow control mechanism, and that it would be obvious to combine Schwartz with Ni in order to better control the cloud pattern of the refrigerant in the tissue to more effectively ablate the tissue.

Regarding claim 21, Applicant’s Response to Non-final Office Action, filed August 31, 2007 (p.17), argued that embodiments of the present invention are operable with refrigerants under

high pressure (citing p.7, line 18; and p.10, lines 2-4), and that Schwartz is a low-pressure design which discharges the entire fluid rather than only a portion of the fluid. The Examiner stated in response in the present Office Action: “it is noted that the features upon which applicant relies (i.e., a ‘high pressure’ design, impeding only a portion of the refrigerant) are not recited in the rejected claim(s).” Therefore, Applicant has amended claim 21 to recite a pressurized refrigerant. For instance, claim 21 recites in part: “*a pressurized* refrigerant discharging mechanism formed in the first non-insulation area, operable to externally discharge *a portion* of the circulated *pressurized* refrigerants into the living tissue” (emphasis added). Therefore, Applicant submits that amended claim 21 is in condition for allowance.

Claim 22 has been amended to recite that the saline solution infused through the gap is at “a relatively low pressure,” in contrast to the pressurized saline solution used as a refrigerant as recited in base claim 21. Support for this may be found at page 11, lines 17-22 of the as-filed specification. Furthermore, claim 22 depends on claim 21, and includes the limitations of its base claim as if set forth therein, and therefore claim 22 is allowable at least for the reasons presented above in reference to claim 21.

Regarding claims 26-27, the Examiner contends that the claimed method is anticipated by the normal use of the device disclosed by Ni in view of Schwartz.

Applicant has amended claim 26 to recite that the method uses *pressurized* refrigerants. Analogous amendments are made to the electrode of claim 21 to overcome Ni in view of Schwartz. Applicant submits that because Ni in view of Schwartz does not disclose or suggest a device in which “*pressurized* refrigerants are circulated … and *a portion* of the circulated *pressurized* refrigerants discharge” (emphasis added) as recited in claim 26, then at least for the reasons presented above in reference to claim 21, claim 26 cannot be anticipated by usage of the device disclosed by Ni in view of Schwartz.

Claim 27 has been amended to recite that the saline solution supplied through the at least one different channel is at “a relatively low pressure,” in contrast to the pressurized refrigerant as

recited in base claim 26. Support for this may be found at page 11, lines 17-22 of the as-filed specification. Furthermore, claim 27 depends on claim 26, and includes the limitations of its base claim as if set forth therein, and therefore claim 27 is allowable at least for the reasons presented above in reference to claim 26.

Applicant respectfully requests reconsideration and withdrawal of the rejection over Ni in view of Schwartz.

Claims 9 and 25 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Ni in view of Schwartz as applied to claims 1 and 21 above, and further in view of U.S. Patent No. 6,017,338 to Brucker et al. (hereinafter “Brucker”). Applicant respectfully traverses the rejection.

The Examiner contends that Ni in view of Schwartz discloses the electrode of claims 1 and 21, but does not disclose the flow control mechanism as a porous metal sintered body layer. The Examiner further contends that Brucker teaches a catheter having a tip made of sintered metal acting as a discharge resistance mechanism, and contends that it would be obvious to combine Ni, Schwartz and Brucker in order to obtain a desired discharged fluid profile in the tissue.

Applicant has canceled claim 9 without prejudice or disclaimer of the subject matter contained therein, rendering the rejection moot.

Claim 25 depends upon claim 21. Applicant has amended base claim 21 as described above, reciting in part a “pressurized” refrigerant. Applicant has also amended claim 25 to recite a “pressurized” refrigerant. Therefore, no combination of Ni, Schwartz or Brucker teaches or suggests:

“**a pressurized** refrigerant discharging mechanism ... operable to externally discharge **a portion** of the circulated **pressurized** refrigerants into the living tissue ... by acting as a discharge resistance to the **pressurized** refrigerants, so as to control a flow of the **pressurized** refrigerants”

as recited in claim 21, or the “pressurized” refrigerant recited in claim 25. Applicant submits that dependent claim 25 is in condition for allowance.

Applicant respectfully requests reconsideration and withdrawal of the rejection over Ni in view of Schwartz and Brucker.

Claims 4, 5, 16, 17, 23 and 24 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Ni in view of Schwartz as applied to claims 1, 3, 6, 7, 15, 21 and 22 above, and further in view of U.S. Patent Publication No. 2003/0208194 to Hovda et al. (hereinafter “Hovda”).

The Examiner contends that Hovda discloses a saline solution pipe and insulation member, and contends that it would be obvious to combine Ni, Schwartz and Hovda in order to ablate desired tissue in a bipolar configuration and to provide a pathway for electrical current flow between the active and return electrodes. Applicant respectfully traverses the rejection.

Applicant has canceled claims 4, 5, 16 and 17 without prejudice or disclaimer of the subject matter contained therein, rendering the rejection moot.

Claims 23 and 24 depend upon base independent claim 21. Applicant has amended base claim 21 as described above, reciting in part a “pressurized” refrigerant. Therefore, no combination of Ni, Schwartz or Hovda teaches or suggests:

“**a pressurized** refrigerant discharging mechanism ... operable to externally discharge a **portion** of the circulated **pressurized** refrigerants into the living tissue ... by acting as a discharge resistance to the **pressurized** refrigerants, so as to control a flow of the **pressurized** refrigerants”

as recited in claim 21. Applicant submits that dependent claims 23 and 24 are in condition for allowance.

Applicant respectfully requests reconsideration and withdrawal of the rejection over Ni in view of Schwartz and Hovda.

New Claims

Claim 29, dependent upon claim 21, has been added to recite subject matter similar to the fifth, sixth, and seventh clauses of canceled claim 1, reciting pressurized refrigerants. Support for claim 29 may be found at least by the support found for canceled claim 1. Pressurized refrigerants are supported by p. 7, line 18 and p.10, lines 2-4 of the original, as-filed specification. Applicant submits that base claim 21 is allowable, thereby rendering dependent claim 29 allowable.

Claim 30, dependent upon base independent claim 21, has been added to recite subject matter similar to canceled claim 6. Support for claim 30 may be found at least by the support found for canceled claim 6. Applicant submits that base claim 21 is allowable, thereby rendering dependent claim 30 allowable.

Claim 31, dependent upon base independent claim 21 and intervening dependent claim 29, has been added to recite subject matter similar to canceled claim 7, reciting pressurized refrigerants. Support for claim 31 may be found at least by the support found for canceled claim 7. Pressurized refrigerants are supported by p. 7, line 18 and p.10, lines 2-4 of the original, as-filed specification. Applicant submits that base claims 21 and 29 are allowable, thereby rendering dependent claim 31 allowable.

Claim 32, dependent upon base independent claim 21 and intervening dependent claims 31 and 29, has been added to recite subject matter of allowed claim 8 and its intervening claims. Support for claim 32 may be found at least by the support found for allowed claim 8. Pressurized refrigerants are supported by p. 7, line 18 and p.10, lines 2-4 of the original, as-filed specification. Applicant submits that base claims 21, 29 and 31 are allowable, thereby rendering dependent claim 32 allowable.

Claim 33, dependent upon base independent claim 21 and intervening dependent claim 29, has been added to recite subject matter similar to canceled claim 9, reciting pressurized refrigerants. Support for claim 33 may be found at least by the support found for canceled claim 9. Pressurized refrigerants are supported by p. 7, line 18 and p.10, lines 2-4 of the original, as-filed specification. Applicant submits that base claims 21 and 29 are allowable, thereby rendering dependent claim 33 allowable.

Claim 34, dependent upon base independent claim 21, has been added to recite the pressure of the pressurized refrigerants. Support for claim 34 may be found at p.7, line 19 of the original, as-filed specification. Applicant submits that base claim 21 is allowable, thereby rendering dependent claim 34 allowable.

Allowable Subject Matter

Claim 8 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicant thanks the Examiner and has incorporated the subject matter of claim 8 and its intervening claims into new claim 32 and its intervening claims, thereby placing claim 32 in condition for allowance.

CONCLUSION

Each and every point raised in the final Office Action dated November 15, 2007 has been addressed on the basis of the above amendments and remarks. In view of the foregoing it is believed that Claims 21-27 and 29-34 are in condition for allowance and it is respectfully requested that the application be reconsidered and that all pending claims be allowed and the case passed to issue.

If there are any other issues remaining which the Examiner believes could be resolved through a Supplemental Response or an Examiner's Amendment, the Examiner is respectfully requested to contact the undersigned at the telephone number indicated below.

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Respectfully submitted,

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